

CLAIMS:

1. A packet switching network comprising:
a plurality of subscriber stations;
at least one switch configured to connect said plurality of subscriber stations to each other;
wherein each output port from each switch on the network satisfies the following relation:

$$\begin{aligned} & i \text{ number of virtual links} \\ & \text{passing through the buffer} \end{aligned} \quad \left[1 + \text{int} \left(\frac{(\text{Jitter In})_i + \max \text{ Latency}}{BAG_i} \right) \right] * \\ & \quad \quad \quad (\max \text{ frame duration}) \leq \text{latency}$$

in which:

the max latency value is a maximum residence time in an output buffer of a switch, this value may be different for each switch in the network,

BAG_i is a minimum time between two consecutive frames belonging to a virtual link i, before they are transmitted,

(Jitter In)_i is a Jitter associated with a virtual link i that represents a time interval between a theoretical instant at which a frame is transmitted, and its effective transmission that may be before or after the theoretical instant, and

(max frame duration)_i is a duration of a longest frame on the virtual link i.

2. A network according to claim 1, wherein the packet switching network is located on an aircraft.

3. A network according to claim 2, wherein the at least one switch includes a first switch connected to a first graphic screen and a second graphic screen.

4. A network according to claim 3, wherein the at least one switch includes a second switch connected to a flight parameters generator and an aircraft maintenance computer.

5. A network process according to claim 4, wherein the first graphic screen displays flight parameters and the second graphic screen displays flight and maintenance parameters.

6. A packet switching network comprising:
a plurality of subscriber stations;
at least one means for switching for connecting said plurality of subscriber stations to each other;

wherein each output port from each means for switching on the network satisfies the following relation:

$$i \text{ number of virtual links passing through the buffer} \quad \left[1 + \text{int} \left(\frac{(\text{Jitter In})_i + \max \text{ Latency}}{BAG_i} \right) \right] * (\max \text{ frame duration}) \leq \text{latency}$$

in which:

the max latency value is a maximum residence time in an output buffer of a switch, this value may be different for each switch in the network,

BAG_i is the minimum time between two consecutive frames belonging to a virtual link i, before they are transmitted,

(Jitter In)_i is Jitter associated with a virtual link i that represents a time interval between a theoretical instant at which a frame is transmitted, and its effective transmission that may be before or after the theoretical instant,

(max frame duration)_i is a duration of a longest frame on the virtual link i.

7. A network according to claim 6, wherein the packet switching network is located on an aircraft.

8. A network according to claim 7, wherein the at least one means for switching includes a first means for switching connected to a first graphic screen and a second graphic screen.

9. A network according to claim 8, wherein the at least one means for switching includes second means for switching connected to a flight parameters generator and an aircraft maintenance computer.

10. A network according to claim 9, wherein the first graphic screen displays flight parameters and the second graphic screen displays flight and maintenance parameters.